

Exhibit B

SDARS Repeater Grandfathering Issues

1 Introduction

FCC grandfathering of existing SDARS repeaters would impose no burden on WCS operations, but a failure to do so would unnecessarily force SDARS operators and their customers to incur heavy costs to construct and operate many additional transmitters. With the deployment of reasonable SDARS filters on WCS base stations, and the deployment of AGC circuitry in the WCS CPE receivers, the task of providing quality service in the vicinity of SDARS high-power repeaters is straightforward.¹ By taking into account the existing SDARS repeaters, WCS operators can deploy base stations in the area near a potentially problematic repeater to insure that adequate signal power is available to the CPE receiver in regions where the AGC threshold is exceeded by the SDARS transmitter. Sirius and XM Radio have demonstrated the successful coordination of their own respective repeater networks using this system design technique; there is no reason why that success cannot be duplicated by WCS system operators. In addition, field tests have confirmed the lack of impact on fixed WCS terminals from nearby SDARS transmitters.²

It has also been demonstrated that converting a single high-power site into multiple lower power sites will actually generate more, not less, overall potential for interference in a given coverage area³

In this Exhibit, XM shows the actual operating distribution of repeater transmitter power, demonstrating that the repeater networks that would be grandfathered operate at relatively low power compared to the examples being used by the WCS Coalition.

Additionally, we provide a summary of the potential impact should XM be required to change out all of its repeater sites above 2kW.

¹ See Letter from Bruce D. Jacobs, Counsel for XM Radio Inc., to Ms. Magalie Roman Salas, FCC, IB Docket No. 95-91, 3-10 (August 29, 2001) ("*XM White Paper*").

² See Comments of XM Radio Inc., IB Docket No. 95-91, Exhibit A, (filed Dec. 14 2001).

³ *XM White Paper* at 15-20.

2 Impact of Reducing Power of Existing Sites to 2kW

2.1 The advantages of using fewer higher power repeaters instead of a greater number of low power repeaters

This analysis demonstrates the extent to which XM Radio has reduced the likelihood of interference to WCS receivers by designing networks for urban coverage that use fewer repeaters. More lower power repeaters results in a larger area where interference with WCS receivers may occur than with fewer high power repeaters.

Figure 1 illustrates the current XM repeater coverage for Indianapolis, which has a single repeater site. Figure 2 illustrates the same market area with an EIRP limit of 2000 watts and the additional 39 sites required to provide the equivalent coverage as the current single site does. The black polygon indicates the approximate boundary of the -88 dBm repeater serving level of the current single-site system for Indianapolis. The green and yellow areas indicate the high service availability and the red indicates low terrestrial signal. If one assumes that there will be some limited “exclusion zone” area around each site, it appears that it would be more difficult for the WCS operators to take into account the multiple SDARS sites than the single existing site in the market.

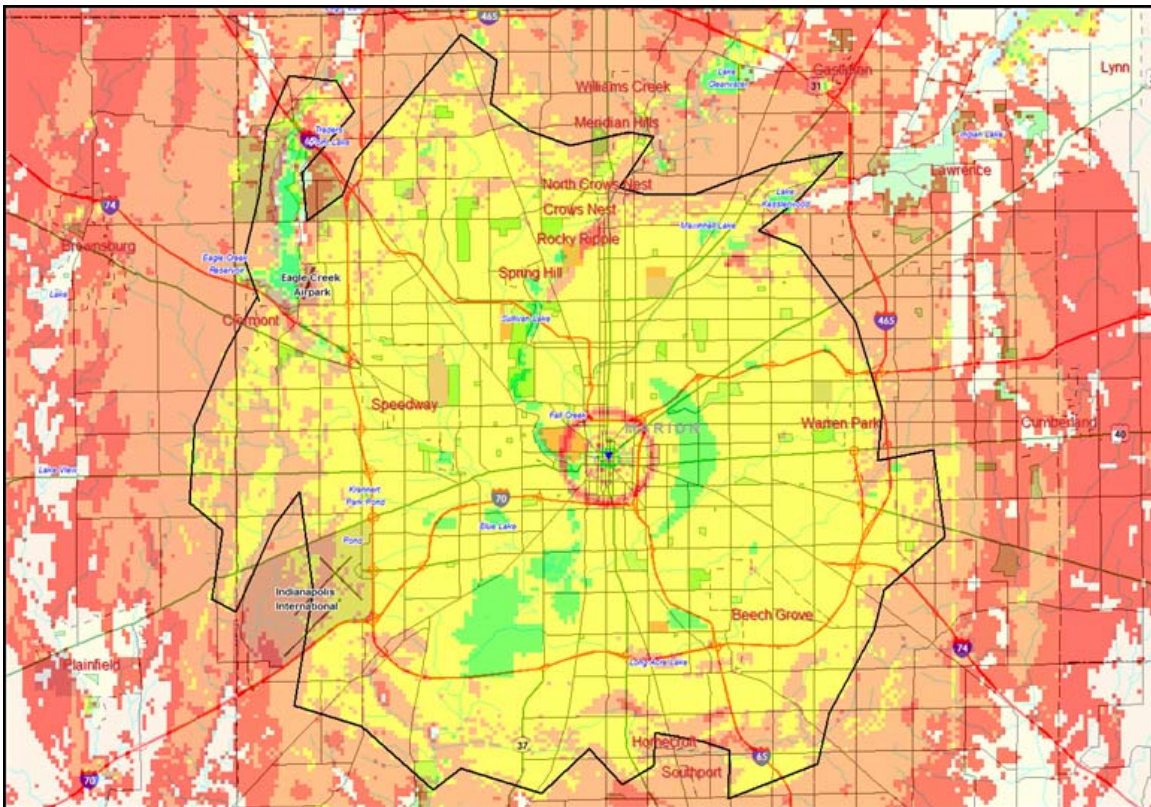


Figure 1. XM current Indianapolis coverage with single site

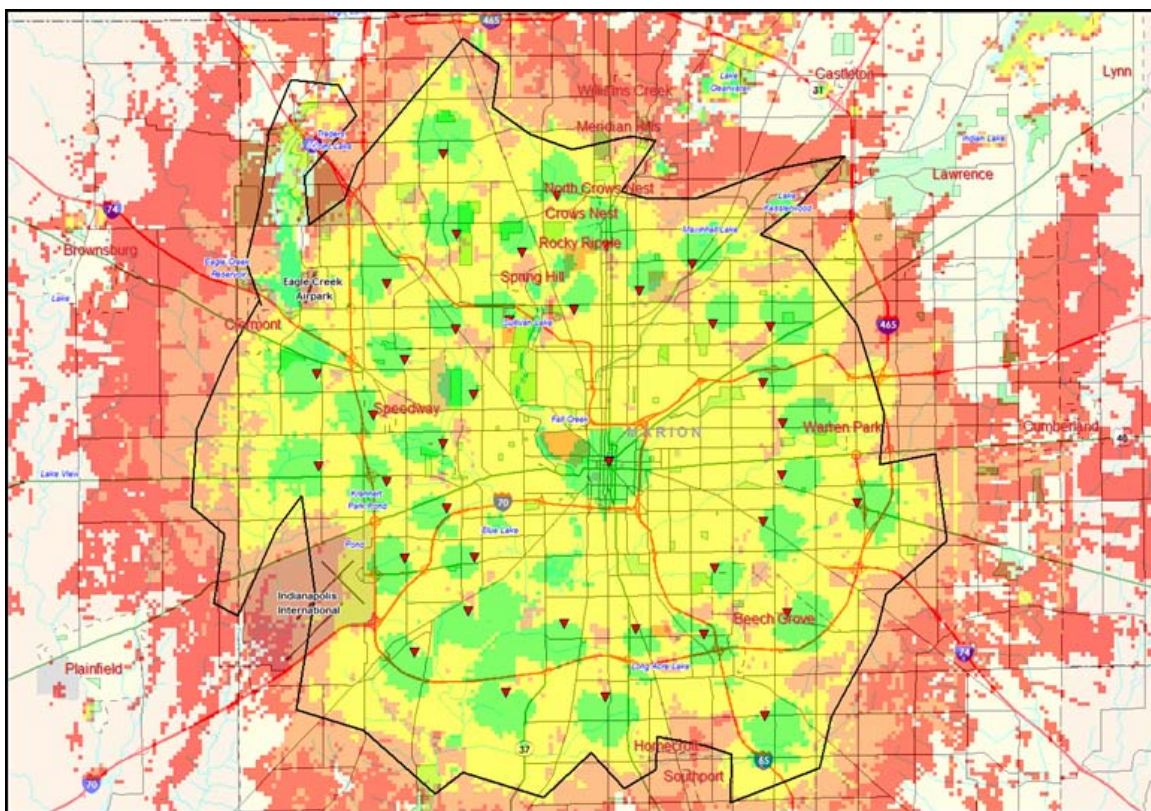
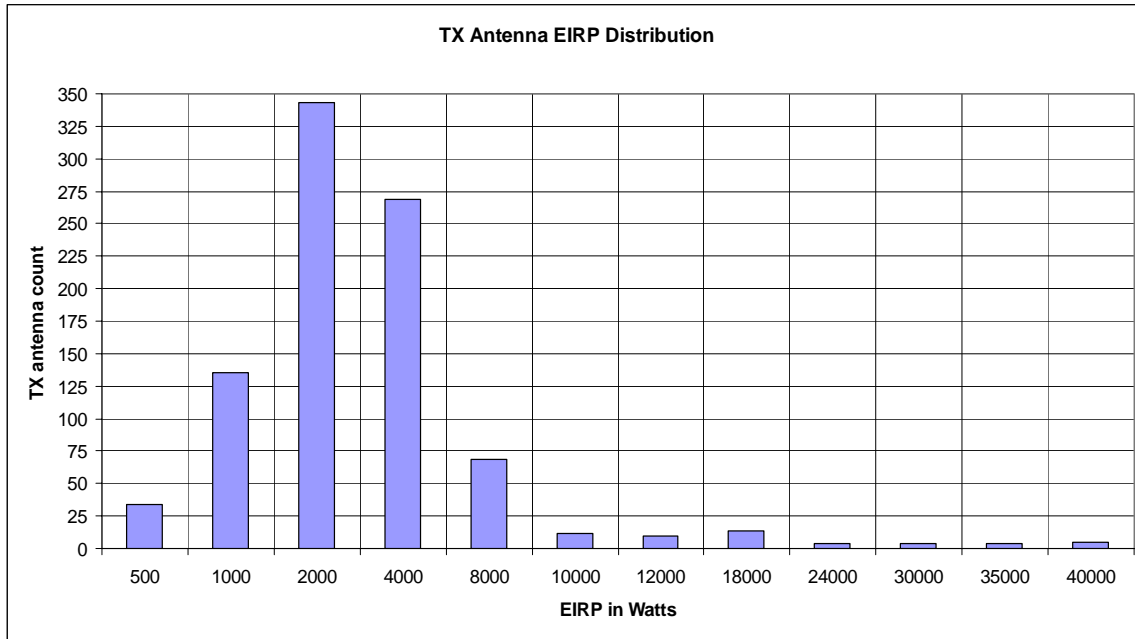


Figure 2. XM current Indianapolis coverage with additional sites at 2000 watt limit

3 Current Network Operating Levels

The following chart is a histogram showing the distribution of the current XM terrestrial network transmit antennas (903 total transmit antennas at 800 sites) designed to be used as part of XM national repeater network.



4 Economic and Schedule Impact

- Several significant problems would arise if XM is required to redesign its existing repeater network to a 2000 watt average power limit:
 - Hundreds of additional sites would be required to recover the loss in coverage due to the 2000 watt limit.
 - The estimated timeframe for the nationwide deployment of the new sites would be at least 24 months, if not longer.
 - The required effort to optimize the new network would cause severe disruption to the service in the markets where new repeaters are required.
 - The existing and new networks would have to exist simultaneously so that in the off peak hours (1-4 a.m.), the network could be reconfigured to conduct drive tests and verify performance. This would mitigate some of the disruption to the current users but lengthen the overall time to finalize the new network for commercial service.
 - The non-recurring costs for the purchase of new repeaters, antennas site acquisition, construction and commissioning activities would be in the tens of millions of dollars.
 - Recurring costs, such as the additional leases, utility cost, and operation and maintenance costs to operate the new repeaters would be in the millions of dollars annually.